

EDS 1700 Series Pressure Switch with Display



Applications



Description

The EDS 1700, with its integrated pressure measuring cell, a 4-digit display and the 4 switching outputs, offers the user all the advantages of a modern electronic pressure switch.

4 switching points and reset points can be adjusted very simply and independently of each other using the keypad.

For optimum incorporation into monitoring systems (e.g. with PLC), an analog output (4 to 20 mA or 0 to 10 V) is also available.

The main applications of the EDS 1700 are in hydraulics and pneumatics. The instrument is ideal for use where frequent switching cycles (several million) require permanent switching point accuracy for simple and precise adjustment

Special Features

- Integrated pressure sensor with strain gauge on stainless steel membrane
- Accuracy 0.25% or 0.5% BFSL
- 4-digit digital display
- User-friendly key programming
- 4 limit relays, switching points and reset points can be adjusted independently
- Analog output signal selectable
- Many useful additional functions
- Optional mounting position (pressure connection on the top/bottom, keypad and display can be turned through 180°)
- Can be set to display values in any unit of measurement e.g.: kN, kg, psi, ...

Approvals



CE mark is a mandatory conformity mark on many products placed on the single market in the European Economic Area

Technical Details

Sensor Specifications	
Measuring ranges - psi	232, 580, 1450, 3625, 5800, 8700
Overload pressure - psi	464, 1160, 2900, 7250, 11600, 14500
Burst pressure - psi	2900, 2900, 7250, 14500, 29000, 29000
Mechanical connection	G1/4A DIN 3852, female
Tightening torque	15 lb-ft (20 Nm)
Parts in contact with media	Stainless steel
Accuracy (B.F.S.L.) including linearity, hysteresis, and repeatability	≤ ±0.25% BFSL (EDS 1700-P) ≤ ±0.5% BFSL (EDS 1700-N)
Temperature drift zero point & range	EDS 1700-N ≤ ±0.0085% / FS typ. ≤ ±0.017% / FS max. EDS 1700-P ≤ ±0.006% / FS typ. ≤ ±0.012% / FS max.
Long-term drift	≤ ± 0.3% FS typ. / year
Life expectancy	10 million load cycles (0 to 100% FS)
Weight	Approximately 800 g
Output signal	4 to 20 mA, ohmic resistance ≤ 400 Ω 0 to 10 V, ohmic resistance ≥ 2 kΩ
Switching Specifications	
Type	4 relays with change-over contacts in 2 groups (common supply of each group connected)
Repeatability	≤ ±0.25% FS max. (EDS 1700-P) ≤ ±0.5% FS (EDS 1700-N)
Switching voltage	100mV to 250 V (AC or DC)
Switching current	0.009 to 2A (per output)
Switching power	max. 50 W / 400 VA (for inductive load use varistors)
Set point range	1.5 to 100% FS
Reset point range	1 to 99% FS
Switching cycles	> 20 million at minimum load > 1 million at maximum load
Reaction time	< 20 ms
Environmental Condition	
Compensated temperature range	-14° to 158°F (-10° to 70°C)
Operating temperature range	-13° to 140°F (-25° to 60°C)
Storage temperature range	-40° to 176°F (-40° to 80°C)
Media temperature range	-13° to 176°F (-25° to 80°C)
CE mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance to DIN EN 60068-2-6 at 10 to 500 Hz	≤ 5g
Environmental protection	IP 65
Electrical Specifications	
Supply voltage	22 to 32 VDC
Residual ripple supply voltage	≤ 10%
Current consumption	approximately 200 mA
Electrical connection	14-pole terminal block
Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection	Standard
Display	7 segment LED display, 4 digits, 13 mm high

Model Code

EDS 17 9 X - X - XXXX - 000

Mechanical Connection

9 = G 1/4 DIN 3852 female port

Display

2 = 4 digit psi

Accuracy

P = 0.25% B.F.S.L.

N = 0.5% B.F.S.L.

Pressure Range

For EDS 1792X only (4 digit psi)

016 (232), 040 (580), 100 (1450), 250 (3625), 400 (5800), 600 (8700) bar (psi)

Modification Number

000 = Standard

Pin Connections

Pin

1	+U _B
2	0 V
3	Analog output signal +
4	Analog output signal -
5	Relay 1 N/C
6	Relay 1 N/C
7	Center relay 1 and 2
8	Relay 2 N/C
9	Relay 2 N/O
10	Relay 3 N/C
11	Relay 3 N/O
12	Center relay 3 and 4
13	Relay 4 N/C
14	Relay 4 N/O

Dimensions

